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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,210	01/20/2004	Hitoshi Suzuki	062709-0127	8071
22428 7590 02/23/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER SPISICH, GEORGE D	
			ART UNIT 3616	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.	Applicant(s)	
10/759,210	SUZUKI ET AL.	
Examiner	Art Unit	
George D. Spisich	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on November 17, 2006 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11 and 13-26 is/are pending in the application.
- 4a) Of the above claim(s) 6, 7, 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11 and 15-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 17, 2006 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 8-11 and 15-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 13-14, and claim 16, lines 13-14, this newly added language is unclear and inaccurate. It is unclear if Applicant is intending to claim that the steering column or the bracket or the slack holder is movable in the front/rear direction. From the specification, page 4, lines 26-29, it appears that the bracket supports the column, such that the column is movable in the front-rear direction. Should Applicant intend to claim that the bracket both supports the column and the bracket moves back and forth

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(with the steering column), that would be unclear since possibly only a portion of the bracket that supports the column appears to move (more accurately, the slack holder is directly fixed to a portion of the steering column mounting bracket and movable with said bracket portion in a front/rear direction) and would not appear to allow for proper operation. Based on Applicant's argument filed 11/17/06, on page 8, in the last 3 lines of the paragraph referring to claim 1, it appears that Applicant is arguing that Takahashi et al. does not suggest the slack holder fixed to the bracket. Examiner is unsure if this detail is what Applicant is intending to claim. For examining purposes in this Office Action, the claims are read as it appears Applicant has argued, since the claim limitations are unclear.

Futhermore, it is unclear to have (1) a movable part fixed to and movable with the steering column, (2) a bracket (portion) movable in a front/rear direction and (3) a slack holder fixed to a movable bracket. It appears that all the parts move, which would not allow for the harness to slide with respect to the slack holder.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (USPN 5,125,685).

Takahashi et al. disclose a harness slack take-up structure for taking up a slack of a harness extended from a steering wheel (see Fig. 6). Inherently, the steering arrangement includes a steering shaft to which a steering wheel is fixed, a steering column configured to rotatably accommodate the steering shaft and slidable together with the steering shaft in a longitudinal direction thereof (again, see Figure 6).

The harness (9 or 30) extends in a frontward direction from the steering wheel and has a slack (9a). There is a slack holder (19) configured to contain the slack of the harness. A movable part (10) is movable in the slack holder configured to slide with the steering column in the front and rear direction and connected to the steering column, and a fixed part (24 or 11,27) relatively fixed to the slack holder. The first end of the slack being held by the movable part (10) and the second end of the slack held by the fixed part (24 or 11,27). The second end with respect to 24 is "fixed" similarly to the manner the second end is "fixed" in Applicant's invention. The first end of the slack engaged with a member of the moveable part is configured to swing in the front/rear direction with the second end of the slack engaged with the fixed part serving as a fulcrum.

When the fixed part is considered portion 11,27, the part has an unimpeded line of sight to "at least a portion" of the movable part since the movable part includes all of the structure that moves and clearly includes portion 17 of the movable part. The fixed parts and the movable part continuously having the slack of the harness therebetween

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as this is a broad limitation and at least a portion if not all of the "slack" is "continuously therebetween".

When the fixed part is considered portion 24, there is at least an unimpeded line of sight of side portion of element 24 to a side portion of element 17 of the movable member.

The slack holder is fixed relative to a vehicle body and the second end of the slack is fixed at a position offset from a central portion of the moving range of the movable part. The distance between an extreme forward position and an extreme rearward position defines a moving range of the movable part.

As shown in Figure 7, the first end of the slack is zigzagged in the movable part (10) so that the first end is held by the movable part.

With respect to the term "pin" used to connect the movable part to the steering column, member 17 includes a "pin"-like portion that extends to connect the movable part to the steering column. The term "pin" is a broad term that is read as a "projection".

With respect to the limitation added that "a bracket supports the steering column and the slack holder is fixed to the bracket", Examiner states that mounting a steering column such as the steering column of Takahashi et al. via a "bracket" is inherent. Since these members are present and connected together, it is proper to claim that the slack holder is fixed to a bracket (via the steering column) and the bracket supports the steering column. The steering column and the slack holder move in a forward/rearward direction, as best understood by Applicant's invention/arguments and claim (since the bracket portion that moves is merely the slack holder).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USPN 5,125,685) in view of Horiuchi et al. (USPN 5,229,544).

Takahashi et al. has been discussed in the prior rejection. However, Takahashi et al. does not a second slack holder having a having a cylindrical inner hollow to store the slack.

Horiuchi et al. disclose a harness slack take-up structure having a slack holder fixed relative to the steering column (see col. 1, lines 31-40), having an inner cylinder (3,3a) through which the steering shaft is passed, an outer cylinder (4) rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder. The length of the slack corresponding to a range in a rotational angle of the steering wheel, the first end of the slack being held by the inner cylinder and a second end of the slack being held by the outer cylinder and the slack being stored in the cylindrical hollow (as best seen in Figure 1). This arrangement allows for the adjustment of slack according to the rotational angle of the steering wheel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering wheel arrangement having a longitudinal harness slack take-up structure of Takahashi et al. by providing a rotary harness slack take-up structure of Horiuchi et al. so as to allow for the slack adjustment in the longitudinal direction as taught by Takahashi et al. and also the rotational slack adjustment as taught by Horiuchi et al. The relative location of the arrangement of Horiuchi et al. to be between the steering wheel and the slack take-up structure of Takahashi et al. would be an obvious location to allow for the rotary adjustment at the steering wheel.

Claims 15-22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USPN 5,125,685) in view of Maeda et al. (USPN 5,556,059) providing in Applicant's IDS.

Takahashi et al. has been discussed in the prior rejection. However, it appears that Takahashi et al. discloses a flat ribbon type harness (cable) having a non-circular cross section.

Maeda et al. discloses a harness slack accommodating arrangement and a harness/cable having a round/circular cross-section. Therefore it is taught that using a round harness is known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the arrangement of Takahashi et al. so as to use a round harness as taught by Maeda et al. so as to provide a more stable and durable harness.



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The modification of the housing of Takahashi et al. would be obvious and within the ordinary skill in the art so as to provide the attaching members to be compatible with a different shaped harness such as circular or round in cross section.

With respect to the limitation added that "a bracket supports the steering column and the slack holder is fixed to the bracket", Examiner states that mounting a steering column such as the steering column of Takahashi et al. is inherently mounted in a vehicle via a "bracket". Since these members are present and connected together, it is proper to claim that the slack holder is fixed to a bracket (via the steering column) and the bracket supports the steering column. The steering column and a portion of the slack holder moves in a forward/rearward direction, as best understood by Applicant's invention and claim (since the bracket portion that moves is merely the slack holder).

### ***Response to Arguments***

Applicant's arguments filed November 17, 2006 have been fully considered but they are not persuasive.

With respect to Applicant's argument that Takahashi et al. does not teach a slack holder fixed to a bracket, Examiner disagrees and maintains the rejection. This argument relates to the 112.2 issue with the added claim language. Examiner is unsure whether the bracket or the slack holder is moving back and forth or if the claimed movements are relative to other elements (at least one of which would be stationary/fixed). Either way, Examiner maintains that Takahashi et al. would inherently

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mount the steering column in the vehicle with a "bracket" and the fact that all claimed elements are shown in Takahashi et al. and fixed to each other (directly or indirectly) and movable in the same manner, that then meets the claim limitation that "a bracket supports the steering column" and that a portion of the bracket or the slack holder and/or the steering column moves in a front/rear direction.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George D. Spisich  
February 17, 2007



2/20/07  
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